ABSTRACT OF THE DISCLOSURE

A carbon nanotube mesh for separating, concentrating, and/or filtering molecules, and a method for fabricating the same. The carbon nanotube mesh includes a plurality of intertwined free-standing carbon nanotubes which are fixedly attached to a substrate. In one embodiment, the microdevice is fabricated by growing the intertwined free-standing carbon nanotubes to extend by free growth from the surface of the substrate into free space.